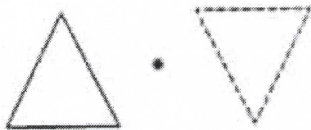


Identifying Transformations

Transformations and Symmetry

Circle the name of the correct transformation for each pair of figures or shapes below. If none of the transformations have been performed, circle *none*.

1.



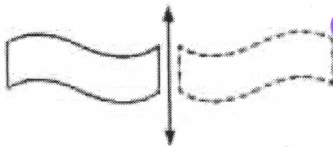
reflection

rotation

translation

none

2.



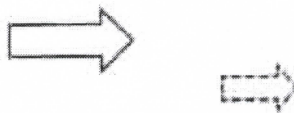
reflection

rotation

translation

none

3.



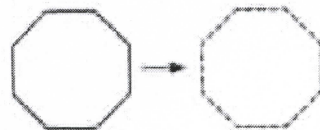
reflection

rotation

translation

none

4.



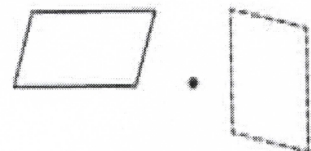
reflection

rotation

translation

none

5.



reflection

rotation

translation

none

6.



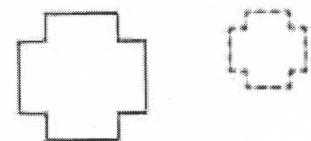
reflection

rotation

translation

none

7.



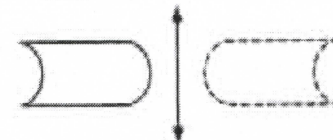
reflection

rotation

translation

none

8.



reflection

rotation

translation

none

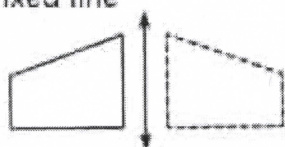
Transformations

Transformations and Symmetry

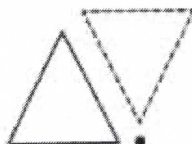
A **transformation** is a movement of specific change to a geometric figure.

Reflections, rotations, and translations are transformations that **do not** result in an object changing size or shape. Therefore, the transformed objects are congruent.

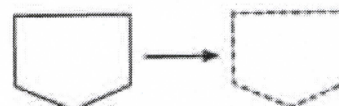
Reflection (or flip)—a transformation that produces a mirror image of a figure reflected across a fixed line



Rotation (or turn)—a transformation that turns a figure around a fixed point

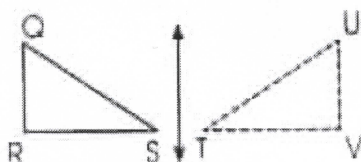


Translation (or slide)—a transformation that shifts or moves a shape in one direction without rotation

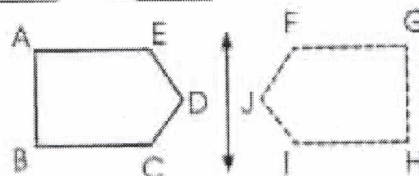


Name the congruent angles of each reflection.

1. $\angle RQS \cong \angle \underline{VUT}$; $\angle QRS \cong \angle \underline{UVT}$
 $\angle QSR \cong \angle \underline{UTV}$

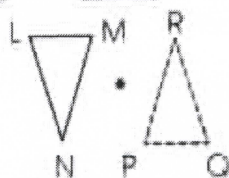


2. $\angle \underline{A} \cong \angle \underline{G}$; $\angle \underline{D} \cong \angle \underline{J}$
 $\angle \underline{B} \cong \angle \underline{H}$; $\angle \underline{E} \cong \angle \underline{F}$
 $\angle \underline{C} \cong \angle \underline{I}$

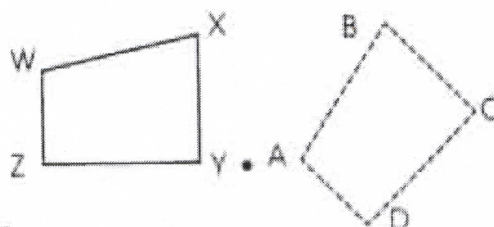


Name the congruent angles of each rotation.

3. $\angle \underline{L} \cong \angle \underline{Q}$; $\angle \underline{N} \cong \angle \underline{R}$
 $\angle \underline{M} \cong \angle \underline{P}$

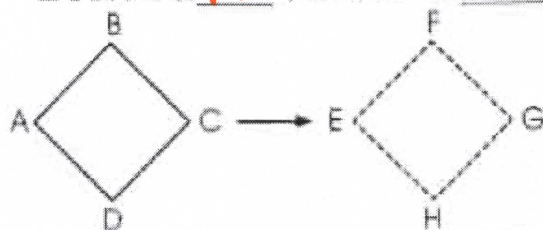


4. $\angle \underline{W} \cong \angle \underline{A}$; $\angle \underline{X} \cong \angle \underline{B}$
 $\angle \underline{Z} \cong \angle \underline{D}$; $\angle \underline{Y} \cong \angle \underline{C}$



Name the congruent angles of each translation.

5. $\angle ABC \cong \angle \underline{EFG}$; $\angle BCD \cong \angle \underline{FGH}$
 $\angle CDA \cong \angle \underline{GHE}$; $\angle DAB \cong \angle \underline{HEF}$



6. $\angle \underline{J} \cong \angle \underline{O}$
 $\angle \underline{K} \cong \angle \underline{P}$
 $\angle \underline{L} \cong \angle \underline{Q}$
 $\angle \underline{H} \cong \angle \underline{R}$
 $\angle \underline{N} \cong \angle \underline{S}$

